Daniel Franta

List of Publications by Year
in descending order

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111
papers

1,943
citations

279487
23
h-index

301761
39
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113
all docs

113
docs citations

113
times ranked

1452
citing authors

#	ARTICLE	IF	CITATIONS
1	Materials Pushing the Application Limits of Wire Grid Polarizers further into the Deep Ultraviolet Spectral Range. Advanced Optical Materials, 2016, 4, 1780-1786.	3.6	337
2	Comparison of effective medium approximation and Rayleighâ€“Rice theory concerning ellipsometric characterization of rough surfaces. Optics Communications, 2005, 248, 459-467.	1.0	82
3	Ellipsometric parameters and reflectances of thin films with slightly rough boundaries. Journal of Modern Optics, 1998, 45, 903-934.	0.6	68
4	Ellipsometry of Thin Film Systems. Progress in Optics, 2000, 41, 181-282.	0.4	48
5	Optical properties of NiO thin films prepared by pulsed laser deposition technique. Applied Surface Science, 2005, 244, 426-430.	3.1	48
6	Deposition of protective coatings in rf organosilicon discharges. Plasma Sources Science and Technology, 2007, 16, S123-S132.	1.3	47
7	Universal dispersion model for characterization of optical thin films over a wide spectral range: application to hafnia. Applied Optics, 2015, 54, 9108.	2.1	47
8	Models of dielectric response in disordered solids. Optics Express, 2007, 15, 16230.	1.7	46
9	Deposition of hard thin films from HMDSO in atmospheric pressure dielectric barrier discharge. Journal Physics D: Applied Physics, 2010, 43, 225403.	1.3	43
10	Influence of overlayers on determination of the optical constants of ZnSe thin films. Journal of Applied Physics, 2002, 92, 1873-1880.	1.1	39
11	Variable-angle spectroscopic ellipsometry of considerably non-uniform thin films. Journal of Optics (United Kingdom), 2011, 13, 085705.	1.0	38
12	Analysis of Slightly Rough Thin Films by Optical Methods and AFM. Mikrochimica Acta, 2000, 132, 443-447.	2.5	37
13	Optical characterization of HfO2 thin films. Thin Solid Films, 2011, 519, 6085-6091.	0.8	32
14	Optical properties of ZnTe films prepared by molecular beam epitaxy. Thin Solid Films, 2004, 468, 193-202.	0.8	30
15	Optical characterization of thin films by the combined method of spectroscopic ellipsometry and spectroscopic photometry. Vacuum, 2005, 80, 159-162.	1.6	30
16	Application of Thomasâ€“Reicheâ€“Kuhn sum rule to construction of advanced dispersion models. Thin Solid Films, 2013, 534, 432-441.	0.8	30
17	Optical properties of diamond-like carbon films containing SiOx. Diamond and Related Materials, 2003, 12, 1532-1538.	1.8	28
18	Influence of lateral dimensions of the irregularities on the optical quantities of rough surfaces. Journal of Optics, 2006, 8, 763-774.	1.5	27

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19	The reflectance of non-uniform thin films. Journal of Optics, 2009, 11, 045202.	1.5	27
20	Dispersion models describing interband electronic transitions combining Tauc's law and Lorentz model. Thin Solid Films, 2017, 631, 12-22.	0.8	26
21	Optical characterization of chalcogenide thin films. Applied Surface Science, 2001, 175-176, 555-561.	3.1	24
22	Expression of the optical constants of chalcogenide thin films using the new parameterization dispersion model. Applied Surface Science, 2003, 212-213, 116-121.	3.1	24
23	Application of sum rule to the dispersion model of hydrogenated amorphous silicon. Thin Solid Films, 2013, 539, 233-244.	0.8	24
24	Optical properties of diamond-like carbon films containing SiOx studied by the combined method of spectroscopic ellipsometry and spectroscopic reflectometry. Thin Solid Films, 2004, 455-456, 393-398.	0.8	23
25	The influence of substrate emissivity on plasma enhanced CVD of diamond-like carbon films. European Physical Journal D, 1999, 49, 1213-1228.	0.4	22
26	Thermal stability of the optical properties of plasma deposited diamond-like carbon thin films. Diamond and Related Materials, 2005, 14, 1795-1798.	1.8	22
27	Spectroscopic ellipsometry of inhomogeneous thin films exhibiting thickness non-uniformity and transition layers. Optics Express, 2020, 28, 160.	1.7	22
28	Analysis of inhomogeneous thin films of ZrO2by the combined optical method and atomic force microscopy. Surface and Interface Analysis, 2001, 32, 91-94.	0.8	21
29	Temperature-dependent dispersion model of float zone crystalline silicon. Applied Surface Science, 2017, 421, 405-419.	3.1	21
30	Optical characterization of randomly microrough surfaces covered with very thin overlayers using effective medium approximation and Rayleighâ€“Rice theory. Applied Surface Science, 2017, 419, 942-956.	3.1	21
31	Measurement of thickness distribution, optical constants, and roughness parameters of rough nonuniform ZnSe thin films. Applied Optics, 2014, 53, 5606.	0.9	20
32	Optical properties of rough LaNiO3 thin films studied by spectroscopic ellipsometry and reflectometry. Applied Surface Science, 2005, 244, 431-434.	3.1	19
33	Optical characterisation of SiO C H thin films non-uniform in thickness using spectroscopic ellipsometry, spectroscopic reflectometry and spectroscopic imaging reflectometry. Thin Solid Films, 2011, 519, 2874-2876.	0.8	19
34	Assessment of non-uniform thin films using spectroscopic ellipsometry and imaging spectroscopic reflectometry. Thin Solid Films, 2014, 571, 573-578.	0.8	19
35	Correlation of thermal stability of the mechanical and optical properties of diamond-like carbon films. Diamond and Related Materials, 2007, 16, 1331-1335.	1.8	17
36	Improved combination of scalar diffraction theory and Rayleighâ€“Rice theory and its application to spectroscopic ellipsometry of randomly rough surfaces. Thin Solid Films, 2014, 571, 695-700.	0.8	17

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37	Characterization of the boundaries of thin films of TiO2by atomic force microscopy and optical methods. Surface and Interface Analysis, 2002, 34, 759-762.	0.8	16
38	Dielectric response and structure of amorphous hydrogenated carbon films with nitrogen admixture. Thin Solid Films, 2011, 519, 4299-4308.	0.8	16
39	Optical characterization of ultrananocrystalline diamond films. Diamond and Related Materials, 2008, 17, 1278-1282.	1.8	15
40	Use of the Richardson extrapolation in optics of inhomogeneous layers: Application to optical characterization. Surface and Interface Analysis, 2018, 50, 757-765.	0.8	15
41	Utilization of the sum rule for construction of advanced dispersion model of crystalline silicon containing interstitial oxygen. Thin Solid Films, 2014, 571, 490-495.	0.8	14
42	Broadening of dielectric response and sum rule conservation. Thin Solid Films, 2014, 571, 496-501.	0.8	14
43	Optical characterization of solâ€"gel deposited PZT thin films by spectroscopic ellipsometry and reflectometry in near-UV and visible regions. Applied Surface Science, 2005, 244, 338-342.	3.1	13
44	Comparative Study of Films Deposited from HMDSO/O2 in Continuous Wave and Pulsed rf Discharges. Plasma Processes and Polymers, 2007, 4, S287-S293.	1.6	13
45	Modeling of optical constants of diamond-like carbon. Diamond and Related Materials, 2008, 17, 705-708.	1.8	13
46	Advanced modeling for optical characterization of amorphous hydrogenated silicon films. Thin Solid Films, 2013, 541, 12-16.	0.8	13
47	Ellipsometric and reflectometric characterization of thin films exhibiting thickness non-uniformity and boundary roughness. Applied Surface Science, 2017, 421, 687-696.	3.1	13
48	Optical Characterization of Non-Stoichiometric Silicon Nitride Films Exhibiting Combined Defects. Coatings, 2019, 9, 416.	1.2	13
49	Complete characterization of rough polymorphous silicon films by atomic force microscopy and the combined method of spectroscopic ellipsometry and spectroscopic reflectometry. Thin Solid Films, 2004, 455-456, 399-403.	0.8	12
50	Characterization of non-uniform diamond-like carbon films by spectroscopic ellipsometry. Diamond and Related Materials, 2009, 18, 364-367.	1.8	12
51	Band structure of diamond-like carbon films assessed from optical measurements in wide spectral range. Diamond and Related Materials, 2010, 19, 114-122.	1.8	12
52	Approximations of reflection and transmission coefficients of inhomogeneous thin films based on multiple-beam interference model. Thin Solid Films, 2019, 692, 137189.	0.8	12
53	Efficient method to calculate the optical quantities of multi-layer systems with randomly rough boundaries using the Rayleighâ€"Rice theory. Physica Scripta, 2019, 94, 045502.	1.2	12
54	Influence of cross-correlation effects on the optical quantities of rough films. Optics Express, 2008, 16, 7789.	1.7	11

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55	Ellipsometric characterization of inhomogeneous nonâ€stoichiometric silicon nitride films. Surface and Interface Analysis, 2013, 45, 1188-1192.	0.8	11
56	Dispersion model of two-phonon absorption: application to c-Si. Optical Materials Express, 2014, 4, 1641.	1.6	11
57	Combination of spectroscopic ellipsometry and spectroscopic reflectometry with including light scattering in the optical characterization of randomly rough silicon surfaces covered by native oxide layers. Surface Topography: Metrology and Properties, 2019, 7, 045004.	0.9	11
58	Influence of technological conditions on mechanical stresses inside diamond-like carbon films. Diamond and Related Materials, 2005, 14, 1835-1838.	1.8	10
59	Optical characterization of double layers containing epitaxial ZnSe and ZnTe films. Journal of Modern Optics, 2005, 52, 583-602.	0.6	9
60	Limitations and possible improvements of DLC dielectric response model based on parameterization of density of states. Diamond and Related Materials, 2009, 18, 413-418.	1.8	9
61	Optical quantities of multi-layer systems with randomly rough boundaries calculated using the exact approach of the Rayleighâ€“Rice theory. Journal of Modern Optics, 2018, 65, 1720-1736.	0.6	9
62	Comparison of dispersion models in the optical characterization of Asâ€“S chalcogenide thin films. Journal of Non-Crystalline Solids, 2006, 352, 5633-5641.	1.5	8
63	Universal Dispersion Model for Characterization of Thin Films Over Wide Spectral Range. Springer Series in Surface Sciences, 2018, , 31-82.	0.3	8
64	Optical characterization of inhomogeneous thin films containing transition layers using the combined method of spectroscopic ellipsometry and spectroscopic reflectometry based on multiple-beam interference model. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, .	0.6	8
65	Ellipsometric characterization of highly non-uniform thin films with the shape of thickness non-uniformity modeled by polynomials. Optics Express, 2020, 28, 5492.	1.7	8
66	Optical characterization of nonabsorbing and weakly absorbing thin films with the wavelengths related to extrema in spectral reflectances. Applied Optics, 2001, 40, 5711.	2.1	7
67	Spectroscopic ellipsometry and reflectometry of statistically rough surfaces exhibiting wide intervals of spatial frequencies. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1399-1402.	0.8	7
68	Combination of synchrotron ellipsometry and table-top optical measurements for determination of band structure of DLC films. Thin Solid Films, 2011, 519, 2694-2697.	0.8	7
69	Ellipsometric characterisation of thin films non-uniform in thickness. Thin Solid Films, 2011, 519, 2715-2717.	0.8	7
70	Different theoretical approaches at optical characterization of randomly rough silicon surfaces covered with native oxide layers. Surface and Interface Analysis, 2018, 50, 1230-1233.	0.8	7
71	Symmetry of linear dielectric response tensors: Dispersion models fulfilling three fundamental conditions. Journal of Applied Physics, 2020, 127, .	1.1	7
72	Wide spectral range optical characterization of yttrium aluminum garnet (YAG) single crystal by the universal dispersion model. Optical Materials Express, 2021, 11, 3930.	1.6	7

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73	Optical quantities of rough films calculated by Rayleigh-Rice theory. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1395-1398.	0.8	6
74	Optical characterization of phase changing Ge₂Sb₂Te₅ chalcogenide films. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1324-1327.	0.8	6
75	Universal dispersion model for characterization of optical thin films over wide spectral range: Application to magnesium fluoride. Applied Surface Science, 2017, 421, 424-429.	3.1	6
76	Determining shape of thickness non-uniformity using variable-angle spectroscopic ellipsometry. Applied Surface Science, 2020, 534, 147625.	3.1	6
77	Analysis of the boundaries of ZrO2and HfO2thin films by atomic force microscopy and the combined optical method. Surface and Interface Analysis, 2002, 33, 559-564.	0.8	5
78	Microwave PECVD of nanocrystalline diamond with rf induced bias nucleation. European Physical Journal D, 2006, 56, B1218-B1223.	0.4	5
79	Dispersion model for optical thin films applicable in wide spectral range. Proceedings of SPIE, 2015, , .	0.8	5
80	Optical characterization of SiO₂thin films using universal dispersion model over wide spectral range. Proceedings of SPIE, 2016, , .	0.8	5
81	Ellipsometry of Layered Systems. Springer Series in Surface Sciences, 2018, , 233-267.	0.3	5
82	Constitutive equations describing optical activity in theory of dispersion. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 553.	0.9	5
83	Complete optical characterization of imperfect hydrogenated amorphous silicon layers by spectroscopic ellipsometry and spectroscopic reflectometry. Thin Solid Films, 1999, 343-344, 295-298.	0.8	4
84	Optical characterization of non-stoichiometric silicon nitride films. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1320-1323.	0.8	4
85	Modeling of dielectric response of Ge_xSb_yTe_z (GST) materials. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S59.	0.8	4
86	Approximate methods for the optical characterization of inhomogeneous thin films: Applications to silicon nitride films. Journal of Electrical Engineering, 2019, 70, 16-26.	0.4	4
87	Statistical properties of the near-field speckle patterns of thin films with slightly rough boundaries. Optics Communications, 1998, 147, 349-358.	1.0	3
88	Characterization of polymer thin films deposited on aluminum films by the combined optical method and atomic force microscopy. Surface and Interface Analysis, 2006, 38, 842-846.	0.8	3
89	Anisotropy-enhanced depolarization on transparent film/substrate system. Thin Solid Films, 2011, 519, 2637-2640.	0.8	3
90	Determination of thicknesses and temperatures of crystalline silicon wafers from optical measurements in the far infrared region. Journal of Applied Physics, 2018, 123, .	1.1	3

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91	Optical properties of the crystalline silicon wafers described using the universal dispersion model. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 062907.	0.6	3
92	Temperature dependent dispersion models applicable in solid state physics. Journal of Electrical Engineering, 2019, 70, 1-15.	0.4	3
93	Mechanical stresses studied by optical methods in diamond-like carbon films containing Si and O. , 2004, 5527, 139.		2
94	Optical and mechanical characterization of ultrananocrystalline diamond films prepared in dual frequency discharges. Surface and Coatings Technology, 2010, 204, 1997-2001.	2.2	2
95	Wide spectral range characterization of antireflective coatings and their optimization. , 2015, , .		2
96	Possibilities and limitations of imaging spectroscopic reflectometry in optical characterization of thin films. Proceedings of SPIE, 2015, , .	0.8	2
97	Evaluation of the Dawson function and its antiderivative needed for the Gaussian broadening of piecewise polynomial functions. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 062909.	0.6	2
98	<title>Comparison of optical and nonoptical methods for measuring surface roughness</title>. , 1999, 3820, 456.		1
99	Determination of the basic parameters characterizing the roughness of metal surfaces by laser light scattering. Journal of Modern Optics, 1999, 46, 279-293.	0.6	1
100	<title>Calculation of the optical quantities characterizing inhomogeneous thin films using a new mathematical procedure based on the matrix formalism and Drude approximation</title>. , 2001, 4356, 207.		1
101	Optical measurement of mechanical stresses in diamond-like carbon films. , 2005, , .		1
102	Optical characterization of diamond-like carbon thin films non-uniform in thickness using spectroscopic reflectometry. Diamond and Related Materials, 2008, 17, 709-712.	1.8	1
103	Optical characterization of hafnia films deposited by ALD on copper cold-rolled sheets by difference ellipsometry. Applied Surface Science, 2017, 421, 420-423.	3.1	1
104	Optical Characterization of Ultra-Thin Iron and Iron Oxide Films. E-Journal of Surface Science and Nanotechnology, 2009, 7, 486-490.	0.1	1
105	Optical quantities of a multilayer system with randomly rough boundaries and uniaxial anisotropic media calculated using the Rayleighâ€“Rice theory and Yeh matrix formalism. Physica Scripta, 2020, 95, 095503.	1.2	1
106	<title>Method of shearing interferometry for characterizing non-Gaussian randomly rough surfaces</title>. , 1996, , .		0
107	Optical characterization of ZnSe thin films. , 2003, , .		0
108	Optical properties of diamond-like carbon films containing SiOx studied by the combined method of spectroscopic ellipsometry and spectroscopic reflectometry. Thin Solid Films, 2004, 455-456, 393-393.	0.8	0

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109	Characterization of optical thin films exhibiting defects. , 2005, , .		0
110	Composition and Functional Properties of Organosilicon Plasma Polymers from Hexamethyldisiloxane and Octamethylcyclotetrasiloxane. Materials Research Society Symposia Proceedings, 2007, 1007, 1.	0.1	0
111	Simultaneous determination of optical constants, local thickness, and local roughness of thin films by imaging spectroscopic reflectometry. , 2015, , .		0